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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,035	02/26/2004	Juei Tsang Hsu	3313-1122P	2924

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EXAMINER
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LEBRON, JANNELLE M

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/786,035	Applicant(s) HSU ET AL.	
	Examiner Jannelle M. Lebron	Art Unit 2861	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 April 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Objections*

1. Claim 12 is objected to because of the following informalities: the preamble refers to an apparatus when it should refer to a method. Appropriate correction is required.
2. Claim 12 is objected to because of the following informalities: the limitation "single scanning unit for plurality of nozzles" should be replaced with "single scanning unit for the plurality of nozzles". Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Ahne et al. (US Patent 6,637,853).
5. Ahne et al. discloses an apparatus for detecting faulty nozzles comprising:

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- Claim 1:

a printing unit (4 in figure 1), which contains an inkjet component with a plurality of nozzles (as seen in figure 2) for printing a predefined test pattern (6 in figure 3) consisted of a plurality of blocks, each of which corresponds to each one of the nozzle (column 3, lines 12-15; lines 64-66);

a scanning unit (16 in figure 1), which scans the predefined test pattern to generate an image thereof (column 3, lines 17-23);

an analyzing unit (18 in figure 1), which analyzes the image of the predefined test pattern to determine the locations of faulty nozzles and returns the result to the printing unit so that normal nozzles are used to compensate for the faulty nozzles in subsequent printing (column 5, lines 36-61; column 7, lines 12-15).

- Claim 2:

further comprising a memory unit (20), which stores the image of the predefined test pattern scanned by the scanning unit and sends the image to the analyzing unit for the analyzing unit to determine which nozzle is faulty (column 6, lines 41-43).

- Claim 3:

wherein the scanning unit (16) is an optical scanner (column 3, lines 17-18; column 5, lines 24-35).

- Claim 4:

wherein the analyzing unit (18) contains a microprocessor (column 3, lines 24-26).

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- Claim 5:

wherein the analyzing unit (18) establishes a mask containing all of the faulty nozzles and returns the mask to the printing unit so that normal nozzles are used to compensate for the faulty nozzles in subsequent printing (column 6, lines 34-40; column 7, lines 12-14).

- Claim 11:

wherein a single scanning unit is provided for the plurality of nozzles (optical sensor 16 in figure 1).

6. Ahne et al. discloses a method for detecting faulty nozzles

- Claim 6:

used in a scanning unit (16 in figure 1) and a connected printing unit (4 in figure 1) with an inkjet component with more than one nozzle (as seen in figure 2), the method comprising the steps of:

printing a predefined test pattern (6 in figure 3) corresponding to the nozzles on the inkjet component (column 3, lines 12-15);

sending the predefined test pattern (6) to the scanning unit (column 4, line 63 – column 5, line 4);

scanning the predefined test pattern (6) to generate an image thereof (column 3, lines 17-23);

analyzing the image of the predefined test pattern (column 5, lines 36-61; column 7, lines 6-10); and

returning the analysis result to the printing unit (4) so that the normal nozzles are used to compensate for the faulty nozzles in subsequent printing (column 7, lines 12-15).

- Claim 7:

wherein the step of printing a predefined test pattern (6) corresponding to the nozzles on the inkjet component prints the predefined test pattern (6) using the printing unit (column 4, lines 63-64; column 5, lines 8-11).

- Claim 8:

wherein the step of scanning the predefined test pattern (6) to generate an image thereof scans the predefined test pattern (6) using the scanning unit (column 3, lines 17-23).

- Claim 9:

wherein the step of scanning the predefined test pattern (6) to generate an image thereof is followed by the step of storing the image of the predefined test pattern (column 6, lines 41-43).

- Claim 10:

wherein the step of analyzing the predefined test pattern (6) determines the faulty nozzles from the blank blocks in the predefined test pattern (column 4, lines 5-57).

- Claim 12:

wherein the scanning is performed by a single scanning unit for the plurality of nozzles (optical sensor 16 in figure 1).

***Response to Arguments***

7. Applicant's arguments filed 04/28/2006 have been fully considered but they are not persuasive.

8. In response to applicant's arguments that Ahne does not disclose "the image data [being] stored in the memory unit", please note that the image data is stored in the memory unit (20 in fig.1; col. 6, lines 41-43).

9. In response to applicant's arguments that Ahne does not disclose that "the analyzing unit analyze[s] the image data of the predefined test pattern", please note that the analyzing unit (18 in fig.1) analyzes the image data of the predefined test pattern (col.5, lines 36-61; col.7, lines 12-15).

10. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., blocks left blank if that pattern corresponds to a clogged nozzle; or avoiding using the faulty nozzle) are not recited in the rejected claim(s).

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988

F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jannelle M. Lebron whose telephone number is (571) 272-2729. The examiner can normally be reached on Monday thru Friday 8:30am-5:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vip Patel can be reached on (571) 272-2458. The fax



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phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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